

REMARKS

Claims 1-12 are currently pending in the application. The Examiner has rejected claims 1-12 as being unpatentable and objected to claim 11 and 12. Further, the Examiner has rejected claims 3, 4 and 7 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which application regards as the invention. The Examiner has rejected claims 1-12 as being anticipated by an article by Leys et al., under 35 U.S.C. §102(b). Leys discusses methods of background correction for direct reading optical emission spectroscopic trace analysis. Leys teaches a system utilizing offset slits and multiple photomultiplier tubes for each slit to detect beam intensities exiting the slits. Leys does not teach or suggest a system in which the apertures of a spectrographic device are separated by a distance corresponding to the bandwidth. Leys also does not teach or suggest a single sensor capable of detecting the two intensities of an luminous beam exiting the slits. In fact, the Leys disclosure requires the use of multiple photomultiplier tubes to detect multiple intensities of light.

Claims 1-12 are hereby cancelled and claims 13-23 are newly presented in a manner to more clearly define the invention. In light of the foregoing amendments and remarks herein, Applicant respectfully submits that all remaining and newly added claims are patentably distinct and in condition for allowance. Reconsideration and allowance of claims 13-23 is requested in view of the remarks and amendments herein.

Specification

The Examiner has objected to the arrangement of the specification. Applicant has amended the specification to include headings and paragraphs in accordance with 37 C.F.C. 1.77(b). Applicant asserts no new matter has been added. Applicant expects the amendments contained herein to overcome the Examiner's objections and respectfully request reconsideration.

Objections to the Claims

The Examiner has objected to certain informalities of the claims, specifically to claims 2 and 4. Applicant has cancelled claims 1-12 and hereby submits new claims 13-23 in a manner to more clearly define the invention. New claim 14 and claim 16 (corresponding to claims 2 and 4, respectively) are believed to be in patentable form and reconsideration is requested. The language to which the Examiner has objected in claim 2, the word "expressibly," has been corrected to "expressible" in claim 14 to better describe the subject matter the applicant regards as the invention. Similarly, the language to which the Examiner has objected in claim 4, "one of said peaks of intensity of the basic signal becomes interesting," has been removed to eliminate the idiomatic errors cited by the Examiner.

Rejections to the Claims Under 35 U.S.C. § 112

The Examiner has rejected claims 3, 4 and 7 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter. Claims 3, 4 and 7 have been cancelled. Applicant respectfully submits that newly submitted

claims 15, 16 and 19 (corresponding to claims 3, 4 and 7, respectively) particularly point out and distinctly claim the subject matter of the invention.

Applicant presents new claim 15 (corresponding to cancelled claim 3) that has eliminated the word “preferably” to comport with Board of Patent Appeals and Interferences precedent and USPTO rules. Additionally, the limitation of the gap between the apertures corresponding to 2 to 4 times the bandwidth has been removed and added to new claim 13.

Applicant has removed the word “preferably” from new claims 16 and 19 (corresponding to cancelled claim 4 and cancelled claim 7, respectively) to comport with Board of Patent Appeals and Interferences precedent and USPTO rules.

Applicant respectfully submits that the present amendments and new claims overcome all rejections under 35 U.S.C. §112, second paragraph, and requests reconsideration and issuance of the newly added claims.

Rejections to the Claims Under 35 U.S.C. § 102(b)

The examiner has rejected claims 1-12 as being anticipated by Leys et al. under 35 U.S.C. §102(b). Applicant has cancelled claims 1-12 and submits that newly added claims 13-23 are patentably distinct from Leys. Applicant respectfully traverses this rejection and, in light of amendments explained below, request reconsideration and allowance of the newly presented claims.

The Leys reference discusses methods of background correction for direct reading optical emission spectroscopic trace analysis using offset exit slits. Unlike the present invention, Leys does not discuss, suggest or teach the separation of the two slits by an amount within the presently claimed range. Newly presented claim 13 (corresponding to cancelled claim 1) now

includes the “first and second apertures being spaced by a distance so that the gap between the first peak of intensity of the basic optical signal and the second peak of intensity of the corrective optical signal corresponds to 2 to 4 times the bandwidth.” Leys is silent as to the correlation of the separation distance of the offset slits to bandwidth. Leys, in fact, merely gives 3 discrete examples of spacings between a top and a bottom slit with no regard to the bandwidth of the two exiting signals. Further, the Examiner has stated in the office action that inclusion of this feature of the invention in independent claim format would be allowable. *See Office Action*, page 6, second paragraph. Applicant respectfully submits that the allowable subject matter of cancelled claim 3 has been included into newly present claim 13 (corresponding to cancelled claim 1.)

Newly presented claims 14-19 are also patentably distinct as being dependent from claim 13. Applicant notes that the Examiner has stated that claims 3, 4, 7 contain patentable subject matter. *See Office Action* page 6, second paragraph. The subject matter of claim 3 is now included in new claim 13, while the subject matter of claims 4 and 7 is included in newly presented claims 16 and 19. Application respectfully requests reconsideration and allowance to these claims.

Newly presented claim 20 (corresponding to cancelled claim 8), is presented having elements not disclosed, suggested or taught by Leys. Claim 20 now includes the inventive feature of the detector “comprising a single sensor.” Leys requires the use of two photomultiplier (“PM”) tubes as detecting means. Specifically, Leys teaches its most accurate system as a “method of monitoring background intensities with dc arc excitation...through the use of auxiliary exit slits or beam splitters using a separate photomultiplier tube for each measurement...” Leys, page 396, second paragraph (emphasis added). Claim 20, in featuring a single sensor, is patentably distinct from the Leys reference in that “a single sensor” is utilized to

detect the intensity of both the luminous beams. Unlike Leys, the present invention, as claimed in claim 20, does not require a separate photomultiplier tube for each measurement, but rather utilizes a single sensor. Applicant further submits the claims 21-23, as dependent claims from claim 20, are patentably distinct from Leys and are in condition for allowance.

Further, Applicant notes that the Examiner has stated claims 11 and 12 contain allowable subject matter. *See Office Action*, page 6, second paragraph. Applicant submits that the subject matter of newly presented claims 22 and 23 correspond to the allowable subject matter of cancelled claims 11 and 12, respectively, and no new matter has been added. Applicant submits that the presently presented claims are patentably distinct from Leys and are in condition for allowance. Applicant respectfully requests reconsideration.

CONCLUSION

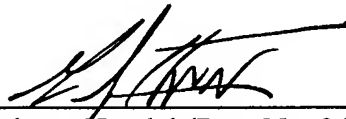
In light of the foregoing remarks and amendments to the specification and claims, Applicant respectfully submits claims 13-23 are patentably distinct from Leys and are in condition for allowance. The inclusion of the distance between the slits corresponding to the range of bandwidth in claim 13, as Examiner has noted, renders the claim and its dependents to be allowable. Also, the inclusion of the single sensor in the detector of claim 20, is sufficient to overcome any rejections arising from the Leys reference. Applicant has also corrected deficiencies in the specification cited by the examiner and amended the claims to better describe the subject matter regarded as the invention by correcting idiomatic errors throughout the claims.

Applicant respectfully requests reconsideration and allowance of the present claims. Applicant asserts no new matter has been added and all amendments and newly presented claims are fully supported in the specification as originally filed.

Authorization is hereby given to charge deposit account 50-0369 in connection with any fees or extension of time or any other fee that may be necessary to permit entry of this response.

Respectfully submitted,

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